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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,326	04/14/2004	Viswanath Annampedu	8-15	5404

7590 03/22/2005  
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EXAMINER

NEGRON, DANIEL L

ART UNIT PAPER NUMBER

2651

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/824,326

Applicant(s)

ANNAMPEDU ET AL.

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-13, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 4-7, 14-17 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 13 and 17 are objected to because of the following informalities:

Regarding claim 13, the recitation "...said peak levels..." lack antecedent basis.

2. Regarding claim 17, the Examiner considers that the recitation concerning the indication of a "strength" of the signal asymmetry could not be found to be described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 8-12, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Feyh et al U.S. Patent No. 6,111,710.

Regarding claim 11, Feyh et al disclose an apparatus for detecting data comprising an interpolator (100) adapted to generate one or more interpolated sample sequences from the data wherein each interpolated sample sequence has a different corresponding phase relative to the data (column 10, lines 15-36).

Feyh et al further disclose a detector adapted to generate a distance measure between a portion of each interpolated sample sequence and an ideal sample sequence (i.e. time difference

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between channel sample values and target sample values), wherein the ideal sample sequence corresponds to peaks in the data (column 11, lines 21-47), generate signal asymmetry information for the portion of each sample sequence (column 16, lines 54-61).

Furthermore, Feyh et al discloses using interpolated timing recovery circuit to calculate values in order to detect and compensate for asymmetries in a signal, therefore the information determined from the interpolated timing recovery is considered asymmetry information.

Feyh et al further discloses a detector to select a sample sequence based on the distance measures for use in detecting the data (column 10, lines 23-25) and adjust (i.e. compute) the ideal sample sequence based on the signal asymmetry information (column 11, lines 52-56).

Regarding claim 12, Feyh et al disclose an apparatus for detecting data wherein the data is a sample sequence read from a recording channel (column 15, lines 40-46).

Regarding claim 18, Feyh et al disclose an apparatus for detecting data wherein the detector is further adapted to adjust the ideal sample sequence based on a gain error metric (column 14, lines 51-67).

Regarding claims 1, 2, 8-10, and 19, method claims 1, 2, 8-10, and 19 are drawn to the method of using the corresponding apparatus claimed in claims 11, 12, and 18. Therefore method claims 1, 2, 8-10, and 19 correspond to apparatus claims 11, 12, and 18 and are rejected for the same reasons of anticipation as used above.

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*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feyh et al U.S. Patent No. 6,111,710 in view of Reed U.S. Patent No. 6,549,351.

Regarding claim 13, Feyh et al disclose an apparatus for detecting data with all the limitations of claim 11 as discussed above but fail to show where peak levels are used to search for an RRO address mark.

However, Reed discloses a device for data detection wherein peaks are used to detect RRO marks (i.e. RRO bit) for the purpose of compensating for repeatable run-out (column 5, lines 24-44).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the apparatus for detecting data disclosed by Feyh et al with the teachings of Reed in order to improve data detection and transfer by providing compensation of repeatable run-out.

Regarding claim 3, method claim 3 is drawn to the method of using the corresponding apparatus claimed in claim 13. Therefore method claim 3 corresponds to apparatus claim 13 and is rejected for the same reasons of obviousness as used above.

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*Allowable Subject Matter*


7. Claims 4-7, 14-17, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30-6:00) alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN   
March 14, 2005

  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600